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| 09/532,535 | 03/22/2000 | Tatsunori Kanai | 0039-7646-2RD | 7763 |

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DATE MAILED: 12/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on <u>22 March 2000</u>.

2a)☐ This action is **FINAL**.     2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) <u>1-20</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-20</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>22 March 2000</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:
        1.☐ Certified copies of the priority documents have been received.
        2.☒ Certified copies of the priority documents have been received in Application No. <u>09/532,535</u>.
        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
        application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application)
since a specific reference was included in the first sentence of the specification or in an Application Data Sheet.
37 CFR 1.78.

    a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific
reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>3 and 4</u>.

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

## DETAILED ACTION

1.      This action is responsive to the application filed on March 22, 2000.  Claims 1-20 are

pending examination.  Claims 1-20 represent a method and system directed towards metadata

generation and registration for various types of data.

*Claim Rejections - 35 USC § 112*

2.      Claim 17 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for

failing to particularly point out and distinctly claim the subject matter which applicant regards as

the invention.  Claim 17 refers to "...the data type detected by the **second** computer readable

program code ..." (pg. 35, line 17).  However, in the same claim, the applicant refers to the data

type being detected by a **first** computer readable program code (line 11).  For the purposes of

further reviewing this claim, it will be assumed that the data type is detected by the first

computer readable code.

*Claim Rejections - 35 USC § 103*

3.      The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.      Claims 1-2, 4-5 and 13-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Jain et al. (U.S. Patent No. 6,463,444) in view of Mehrotra et al. (U.S. Patent No. 6,115,717)

Jain teaches the invention substantially as claimed including a system and method for

video cataloging using metadata (see abstract).

As to claim 1, Jain teaches a meta-data registration method comprising the steps of:

detecting a data type of the registration data (col. 9, lines 52-67; Jain discloses an audio

feature extractor that detects the class of an incoming audio signal)

selecting one procedure corresponding to the data type detected by the detecting step,

from a plurality of procedures provided in correspondence to respective data types and stored in

advance, each procedure having a program code for generating the meta-data for data according

to a corresponding data type (col. 10, lines 1-14; Jain discloses that the audio signal is

processed by selected feature extractors which generate metadata based on the detected class)

generating the meta-data for the registering data by executing the program code of said

one procedure selected by the selecting step (col. 10, lines 15-27; col. 12, lines 24-43; Jain

discloses that metadata is generated by the feature extractors); and

registering the meta-data generated by the generating step in relation to the registering

data into the data server (Fig. 1, col. 3, lines 44-60; Jain discloses that a video cataloger

generates metadata and sends it to a metadata server).

Jain fails to teach the limitation of a data server that registers and manages the data and the meta-data for the data.

However, Mehrotra teaches a system for storing open space metadata along with its associated image in an image database (see abstract). Mehrotra teaches the limitation of a data server that registers and manages data and meta-data for data (col. 3, lines 20-26; Mehrotra discloses that an image and its open space metadata are stored in a database system).

It would have obvious to one of ordinary skill in the art at the time of the invention to modify Jain in view of Mehrotra by storing the data and its associated metadata in the same database. One would be motivated to do so to allow for more efficient browsing and retrieval of the contents of the database.

As to claim 2, Jain teaches the method of claim 1 above, wherein each procedure also contains information for specifying types of the meta-data to be generated according to the corresponding data type (Fig. 9, col. 12, lines 24-43; Jain discloses that each feature extractor generates a specific type of metadata).

As to claim 4, Jain teaches the method of claim 2, wherein a value of the metadata is generated by extracting at least one of the information contained in the registering data and separately stored information that is acquired according to the information contained in the registering data (col. 10, lines 1-38; Jain discloses that speech feature extractors generate metadata using information from the audio signal and information from stored dictionaries).

As to claim 5, Jain teaches the method of claim 1, wherein the detecting step detects the data type by checking at least one of information contained in a registration request for the registering data issued to the data server, information contained in the registering data, and a type

of a device from which the registering data are entered (col. 9, lines 52-67; Jain discloses that the

contents of an audio signal are categorized by an Audio Class Profiler).

Claim 13 represents a device claim that corresponds to method claim 1. It does not teach

or define any new limitations above claim 1, and therefore is rejected for similar reasons.

As to claim 14, Jain teaches the meta-data registration device of claim 13, further

comprising a generation unit configured to generate the meta-data for the registering data by

executing the program code of said one procedure selected by the selection unit, wherein the

output unit registers the meta-data generated by the generation unit in relation to the registering

data into the data server (Fig. 1, col. 3, lines 44-60; col. 9, line 46 – col. 10 line 38; Jain discloses

a system comprising video cataloger that generates metadata using selected feature extractors,

and outputs the metadata to a metadata server).

As to claim 15, Jain teaches the meta-data registration device of claim 13, further

comprising an acquisition unit configured to acquire the meta-data for the registering data

generated by executing the program code of said one procedure selected by the selection unit,

wherein the output unit registers the meta-data for the registering data acquired by the acquisition

unit in relation to the registering data into the data server (Fig. 1, col. 3, lines 44-60; col. 8, lines

45-63; Jain discloses a video cataloger which produces metadata to be stored in a metadata

server, comprising a Metadata Track Index manager to acquire the metadata from feature

extractors, and an output filter manager to output the metadata).

As to claim 16, Jain teaches a data server device, comprising:

a request processing unit configured to receive and process a registration request for

registering data to be registered into the data server device (Fig. 1, col. 3, line 44 – col. 4, line 12;

Fig. 4, col. 5, lines 14-25; Jain discloses that video encoders comprise capture units that receive

video information to be processed and stored in a content server);

a management unit configured to register the registering data according to the registration

request (Fig. 1, col. 3, line 44 – col. 4, line 12; Fig. 4, col. 5, lines 14-25; Jain discloses that

video encoders comprise encoding processors that process and send  encoded digital video data

to a content server);

a detection unit configured to detect a data type of the registering data (col. 9, lines 52-

67; Jain discloses an audio feature extractor that detects the class of an incoming audio signal);

a selection unit configured to select one procedure corresponding to the data type

detected by the detection unit, from a plurality of procedures provided in correspondence to

respective data types and stored in advance, each procedure having a program code for

generating the meta-data for data according to a corresponding data type (col. 10, lines 1-14; Jain

discloses that the audio signal is processed by selected feature extractors which generate

metadata based on the detected class);

a generation unit configured to generate the meta-data for the registering data by

executing the program code of said one procedure selected by the selection unit type (col. 10,

lines 15-27; col. 12, lines 24-43; Jain discloses that metadata is generated by the feature

extractors); and

a registration unit configured to register the metadata generated by the generation unit

(Fig. 1, col. 3, lines 44-60; col. 8, lines 45-63; Jain discloses that a video cataloger which outputs

metadata to a metadata server, comprises an output filter manager to manage the generated

metadata).

Jain fails to teach the limitation of the management unit managing the data and the meta-data for the data.

However, Mehrotra teaches a system for storing open space metadata along with its associated image in an image database (see abstract). Mehrotra teaches the limitation of a management unit configured to manage data and meta-data for data (Fig. 1, col. 3, lines 20-26; Mehrotra discloses a component that verifies and inserts metadata and its image into a database).

It would have obvious to one of ordinary skill in the art at the time of the invention to modify Jain in view of Mehrotra and avoid having separate units manage the data and metadata. One would be motivated to do so to eliminate the need for separate databases, thereby reducing the time taken to register and retrieve information in the database.

Claims 17-20 represent programs claims that correspond to device claims 13-16. They do not teach or define any new limitations above claims 13-16, and therefore are rejected for similar reasons.


Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jain et al. in view of Mehrotra et al., and further in view of Morgenstern (U.S. Patent No. 5,970,490)

Jain teaches the invention substantially as claimed including a system and method for video cataloging using metadata (see abstract).

As to claim 3, Jain teaches the method of claim 2 above.

Jain fails to teach the limitation wherein the plurality of procedures are designed such that those meta-data that are generated by different procedures but that have an identical meaning to an application or a user will be given an identical name.

However, Morgenstern teaches a method that provides high-level user interfaces and program level access across heterogeneous databases (see abstract). Morgenstern teaches the limitation wherein metadata that have identical meaning to an application or user will be given an identical name (col. 45, lines 8-18; Morgenstern discloses that metadata of the same nature are given the same column name in a meta-table).

It would have obvious to one of ordinary skill in the art at the time of the invention to modify Jain in view of Morgenstern to create a more compact representation of the metadata. One would be motivated to do so to provide greater conciseness of information and to save space in a database.


Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jain et al. in view of Mehrotra et al., and further in view of Takeda et al. (U.S. Patent No. 6,101,215).

Jain teaches the invention substantially as claimed including a system and method for video cataloging using metadata (see abstract).

As to claim 6, Jain teaches the method of claim 1 above.

Jain fails to teach the limitation further comprising the steps of carrying out at least one of a processing for generating one meta-data indicating non-existence of a corresponding procedure and registering said one meta-data in relation to the registering data, and a processing for notifying the non-existence of the corresponding procedure to an application or a user, when the corresponding procedure of the data type detected by the detecting step does not exist among the plurality of procedures stored in advance.

However, Takeda teaches a system and method for transmitting data (see abstract).

Takeda teaches the limitation of notifying an application or a user when the corresponding

procedure of the data type detected by the detecting step does not exist (col. 5, lines 34-47;

Takeda discloses that if an unknown data type is received, a request is sent to the transmitting

means to send information regarding the appropriate processing method).

It would have obvious to one of ordinary skill in the art at the time of the invention to

modify Jain in view of Takeda by having a process for managing received data when its data

type is unknown. One would be motivated to do so ensure that all received data is properly

classified and processed for future retrieval from the database.


Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jain et al. in view

of Mehrotra et al., and further in view of Lee (U.S. Patent No. 6,466,970)

Jain teaches the invention substantially as claimed including a system and method for

video cataloging using metadata (see abstract).

As to claim 7, Jain teaches the method of claim 1 above.

Jain fails to teach the limitation wherein the plurality of procedures includes a first

procedure corresponding to structured documents, which contains a structure information

indicating a structure as a type of the metadata to be generated, extracts a portion specified by the

structure information from a document represented by the registering data, and generates the

meta-data given by an extracted portion in correspondence to a name specified by the first

procedure.

However, Lee teaches a method for collecting and storing information about the contents

of Web pages (see abstract). Lee teaches the limitation wherein metadata contains structure

information (col. 9, lines 32-45; Lee discloses that metadata description for a Web page can use

any well known markup language to describe the logical structure of a document).

It would have obvious to one of ordinary skill in the art at the time of the invention to

modify Jain in view of Lee so as to generate a simple and meaningful representation of the

structure of information in a file. One would be motivated to do so to allow users to quickly

search the contents of a database.


Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jain et al. in view

of Mehrotra et al., further in view of Lee, and further in view of Morgenstern (U.S. Patent No.

5,970,490).

Jain teaches the invention substantially as claimed including a system and method for

video cataloging using metadata (see abstract).

As to claim 8, Jain teaches the method of claim 7 above.

Jain fails to teach the limitation wherein the first procedure defines the structure

information for each definition information that defines a document structure, and is designed

such that those meta-data that are generated from different documents using different definition

information but that have an identical meaning to an application or a user will be given an

identical name.

However, Lee teaches a method for collecting and storing information about the contents

of Web pages (see abstract). Lee teaches the limitation wherein the structure information for

each definition information defines a document structure (col. 9, lines 32-45; Lee discloses that

metadata description for a Web page can use any well known markup language (e.g. XML,

SGML) to describe the logical structure of a document).

Morgenstern teaches a method that provides high-level user interfaces and program level

access across heterogeneous databases (see abstract). Morgenstern teaches the limitation

wherein meta-data that are generated from different documents using different definition

information but that have an identical meaning to an application or a user will be given an

identical name (col. 45, lines 8-18; Morgenstern discloses that metadata of the same nature are

given the same column name in a meta-table).

It would have obvious to one of ordinary skill in the art at the time of the invention to

modify Jain in view of Lee and Morgenstern to create a more compact representation of the

structure of information in a file. One would be motivated to do so to provide greater

conciseness of information and to save space in a database, and to allow users to quickly search

the contents of a database.


Claims 9 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jain

et al. in view of Mehrotra et al., and further in view of Motoyama et al. (U.S. Patent No.

6,304,948).

Jain teaches the invention substantially as claimed including a system and method for

video cataloging using metadata (see abstract).

As to claim 9, Jain teaches the method of claim 1 above, comprising the steps of

selecting a procedure from a plurality of procedures stored in advance, each of the

plurality of procedures having program code for generating metadata; and generating metadata

by executing the program code of the procedure selected by the selecting step (col. 10, lines 1-

14; Jain discloses that an audio signal is processed by selected feature extractors which generate

metadata based on the detected class); and

updating the metadata already registered to the new metadata generated by the generating

step (col. 9, lines 4-16; Jain discloses updating a GUI display when a metadata track receives

newly generated metadata).

Jain fails to teach the limitation wherein the data server manages data using directories,

and the method further comprises the steps of additionally selecting another procedure

corresponding to one directory for containing data to be added or deleted, from another plurality

of procedures provided in correspondence to respective directories and stored in advance, each of

the another plurality of procedures having another program code for generating directory meta-

data that can be utilized in managing a corresponding directory, when a new data is to be added

to or an existing data is to be deleted from the data server; additionally generating new directory

meta-data by executing the another program code of the another procedure selected by the

additionally selecting step; and updating the directory meta-data already registered in relation to

said one directory to the new directory meta data generated by the additionally generating step.

However, Motoyama teaches a method for storing, maintaining and accessing data (see

abstract). Motoyama teaches the limitation wherein directory meta-data can be utilized in

managing a corresponding directory when an existing data is to be deleted from the data server

(col. 5, lines 19-38; col. 6, lines 26-32; Motoyama discloses that a directory metadata contains expiration information used to determine if an existing file should be deleted).

It would have obvious to one of ordinary skill in the art at the time of the invention to modify Jain in view of Motoyama to manage data using directory metadata so that different data may reside in memory for different periods of time. One would be motivated to do so assure the integrity of the stored data.

As to claim 11, Jain teaches the method of claim 1 above, wherein the data server manages data using directories, and the method further comprises the steps of registering the meta-data generated for the registering data in relation to the registering data when the meta-data generated for the registering data does not match with directory meta-data that is used in managing one directory for containing the registering data, and not registering the meta-data generated for the registering data otherwise step (Fig. 1, col. 9, lines 4-16; Jain discloses that a metadata track of the video cataloger decides if a GUI displays requires updating when it receives newly generated metadata).

As to claim 12, Jain teaches the method of claim 11 above, further comprising the step of managing the registering data at the data server by using the meta-data registered in relation to the registering data when the meta-data registered in relation to the registering data exists (col. 12, lines 49-67; Jain discloses that metadata is processed so as to display its stored digital video in a browser).

Jain fails to teach limitation of managing the registering data using the meta-data for a directory if meta-data for registering data does not exist.

However, Motoyama teaches a method for storing, maintaining and accessing data (see abstract). Motoyama teaches the limitation of managing the registering data by using the meta-data for a directory (col. 5, lines 19-38; col. 6, lines 26-32; Motoyama discloses that a directory metadata contains expiration information used to determine if an existing file should be deleted).

It would have obvious to one of ordinary skill in the art at the time of the invention to modify Jain in view of Motoyama by having a back-up procedure for managing data when no corresponding metadata exists. One would be motivated to do so assure the integrity of the stored data.


Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jain et al. in view of Mehrotra et al., further in view of Motoyama et al., and further in view of Takeda et al.

Jain teaches the invention substantially as claimed including a system and method for video cataloging using metadata (see abstract).

As to claim 10, Jain teaches the method of claim 1 above.

Jain fails to teach the limitation wherein the data server manages data using directories, and the method further comprises the steps of notifying an application or a user that issued a registration request for the registering data to the data server when the meta-data generated for the registering data does not match with the directory meta-data that is used in managing one directory for containing the registering data.

However, Motoyama teaches a method for storing, maintaining and accessing data (see abstract). Motoyama teaches the limitation wherein the data server manages data using

directories (col. 5, lines 30-38; col. 6, lines 26-32; Motoyama discloses that directory entries

contains file management information for data files).

Takeda teaches a system and method for transmitting data (see abstract). Takeda teaches

the limitation of notifying an application or a user that issued a registration request for the

registering data to the data server when the meta-data generated for the registering data does not

match with the directory meta-data that is used in managing one directory for containing the

registering data (col. 5, lines 34-47; Takeda discloses that if an unknown data type is received, a

request is sent to the transmitting means to send information regarding the appropriate

processing method).

It would have obvious to one of ordinary skill in the art at the time of the invention to

modify Jain in view of Takeda by having a process for managing received data when its data

type is unknown. One would be motivated to do so ensure that all received data is properly

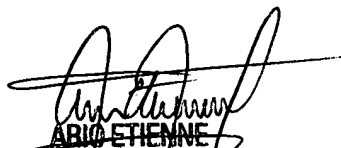classified and processed for future retrieval from the database.

It would have obvious to one of ordinary skill in the art at the time of the invention to

modify Jain in view of Motoyama and Takeda by using directory information to validate each

data file. One would be motivated to do so ensure that all received data is properly classified and

processed for future retrieval from the database.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lesa Kennedy whose telephone number is (703)305-8865. The examiner can normally be reached Monday-Friday, 8:30 – 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (703)308-7562. The fax phone number for the organization where this application or proceeding is assigned is (703)305-3719.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

Lesa Kennedy
Art Unit 2157

ARIO ETIENNE
SUPERVISORY PATENT EXAMINER
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